



A Brief Note on Source and Deficiency of Vitamin C

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Description

Vitamin C, or ascorbic acid, is a water-soluble vitamin. This means it dissolves in water and is absorbed into body tissues but is not well stored, so it should be taken daily with food or supplements. Vitamin C, better known as ascorbic acid, is a powerful water-soluble antioxidant found in blood plasma. As it dissolves in water, it absorbs free radicals from fluid-soluble cell components, i.e., in intracellular fluid or plasma.

Vitamin C plays a role in the management of disease and ulcers, and it is a powerful antioxidant that can reduce harmful free radicals. It is necessary to make collagen, a fibrous protein in the connective tissue woven into all the various systems in the body: fear, immune system, bones, cartilage, blood, and others. The vitamin helps to make several hormones and chemical messengers that are used in the brain and nerves.

The intestines have a limited ability to absorb vitamin C. In healthy adults, mega dose of vitamin C is not toxic because once the body's tissues are full of vitamin C, the absorption is reduced and any excess will be excreted in the urine. Absorption is no different when it comes to vitamins in foods or supplements. Vitamin C is sometimes given as an injection into the arteries (veins) so that high amounts can enter the bloodstream directly.

Sources of Vitamin C

Fruits and vegetables are excellent sources of vitamin C. citrus fruits, tomatoes and tomato juice, and potatoes are rich sources of vitamin C in the American diet. Other good food sources include red and green peppers, kiwifruit, broccoli, strawberries, Brussels sprouts, and cantaloupe.

Although vitamin C is not naturally present in cereals, it is added to other fortified cereals. The content of vitamin C in food can be reduced by prolonged storage and cooking because ascorbic acid dissolves in water and is destroyed by heat. Microwaving may reduce cooking losses. Fortunately, many of the best sources of vitamin C, such as fruits and vegetables, are often eaten raw. A variety of five fruits and vegetables a day can provide more than 200 mg of vitamin C.

Vitamin C Deficiency

Severe vitamin C deficiency leads to scurvy. The timing of the development of scurvy varies, depending on the body's stores of vitamin C, but symptoms may appear within 1 month of taking a dose or lack of vitamin C. Early symptoms may include fatigue (possibly a result of carnitine biosynthesis), malaise, and inflammation of the gums. As vitamin C deficiency persists, collagen formation deteriorates and connective tissue weakens, causing petechiae, ecchymoses, purpura, joint pain, poor wound healing, hyperkeratosis, and cork hair. Additional symptoms of scurvy include depression and inflammation, bleeding gums and loose or tooth loss due to muscle and capillary weakness. Iron deficiency anaemia may occur due to increased bleeding and decreased iron absorption of non-iron dependent second to minimal vitamin C. In children, rheumatoid arthritis can occur. If left untreated, scurvy can be fatal.

Vitamin C is low in toxins and is not believed to cause serious side effects when eating too much. The most common complaints are diarrhoea, nausea, stomach cramps, and other stomach disorders due to the osmotic effect of vitamin C not being absorbed into the digestive tract.